

## **CONSTRUCTING TASK: PERFECT 500!**



### **STANDARDS OF MATHEMATICAL CONTENT**

**MCC.3.NBT.2** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

### **STANDARDS FOR MATHEMATICAL PRACTICE**

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
6. Attend to precision.
8. Look for and express regularity in repeated reasoning.

### **BACKGROUND KNOWLEDGE**

Students should have addition skills clearly in place, and strategies for larger numbers, including counting up, counting back, pairs that make ten, pairs that make 100, and compensation strategies.

Students may find this game challenging, particularly at the beginning of the year. When introducing this game, you may choose to use one of the variations of the game from the list below.

- Play just one round, the students with the sum closest to 100 wins.
- Play just one round as a class. Put the digits on the board and let students create the sum that is closest to 100.
- Discuss the relationship between pairs of 10 and pairs of 100. (i.e.  $4 + 6 = 10$ , so  $40 + 60 = 100$  What about  $42 + 68$ ? Why doesn't that equal 100?

### **ESSENTIAL QUESTIONS**

- How can I learn to quickly calculate sums in my head?
- What strategies will help me add numbers quickly and accurately?
- What strategies are helpful when estimating sums in the hundreds?

### **MATERIALS**

- Deck of game cards, (2 copies of the cards provided for a deck of 40 cards)
- "Perfect 500" Directions Sheet
- "Perfect 500" Student Recording Sheet

## GROUPING

Partner/Small Group Game

## TASK DESCRIPTION, DEVELOPMENT AND DISCUSSION

This game allows students to look for combinations of numbers that equal 100.

### **Task Directions**

The goal of the game is to have a sum as close to, but not over, 500 at the end of five rounds. To begin, each student is dealt 5 cards. The player uses four of the cards to make 2, two-digit numbers, saving the unused card for the next round. Each player tries to get as close as possible to 100. Students record their addition problem on the recording sheet, keeping a running total as they play.

For the second round, each player gets four cards to which they add the unused card from the first round. The student, who is closest to 500 without going over, after five rounds, is the winner.

Perfect 500!						
Player 1 _____				Date _____		500
						Running Total
1		+		=		
2		+		=		
3		+		=		
4		+		=		
5		+		=		
					Total	

### **Questions/Prompts for Formative Student Assessment**

- What is one way to quickly find the answer? Can you think of another way?
- How do you know you will not go over 500?
- How do you decide which numbers to use? How do you choose which cards to use?

### **Questions for Teacher Reflection**

- What strategies are students using successfully?
  - Are there strategies that would be helpful to model for students?
- MATHEMATICS • GRADE 3 • UNIT 1: Number and Operations in Base Ten

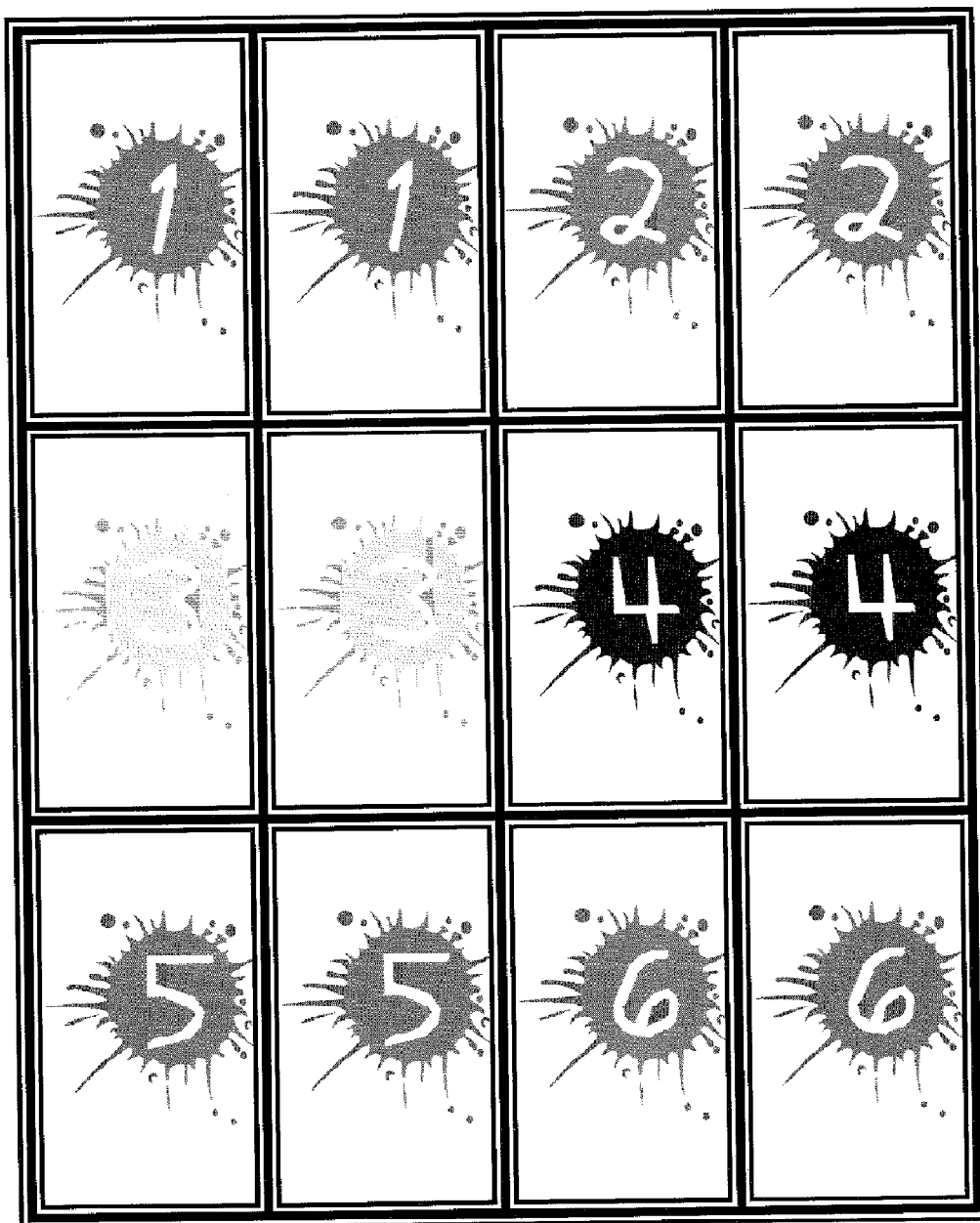
## **DIFFERENTIATION**

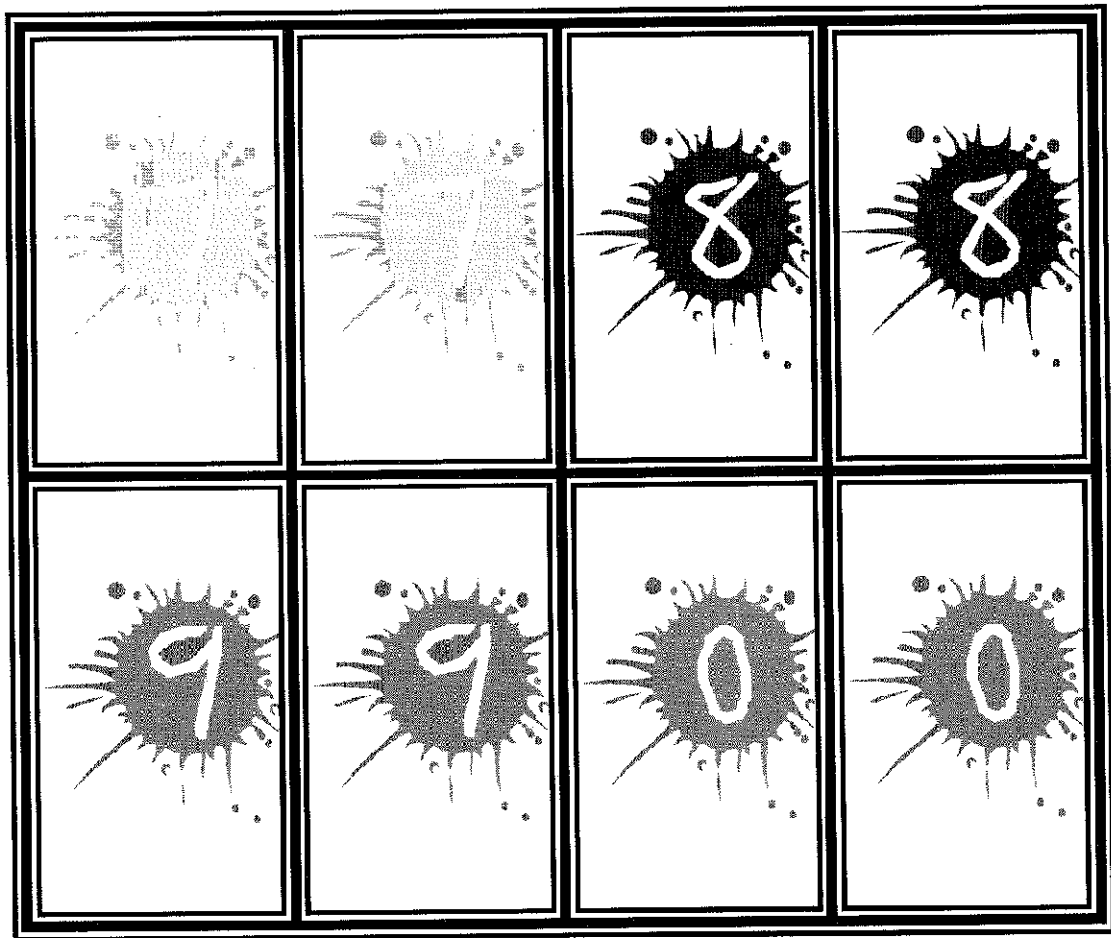
### **Extension**

- Students can play “Perfect 5,000” during which each player draws 7 cards and uses 6 to make 2, three-digit numbers whose sum is close to 1,000. After 5 rounds, the player with the sum closest to 5,000 without going over is the winner.

### **Intervention**

- Plan for students with like abilities to play against each other.
- Students can play “Perfect 100” during which each player draws 4 cards and adds the numbers on three cards to find a sum as close as possible to 20. After 5 rounds, the player with the sum closest to 100 without going over is the winner.





Name \_\_\_\_\_ Date \_\_\_\_\_

## Perfect 500



Number of Players: 2 or 3

Materials: One deck of 40 cards (4 each of the numbers 0-9)

### Directions:

1. The goal of the game is to have a sum as close to but not over 500 at the end of five rounds.
2. To begin, shuffle the deck of cards.
3. Deal 5 cards to each player. Use four of the cards to make 2, two-digit numbers, saving the fifth card for the next round.
4. Try to get as close as possible to 100. Record your addition problem and sum on the recording sheet, keeping a running total as you play.
5. For the second round, each player gets four cards to which they add the unused card from the first round.
6. After five rounds, the winner is the player who is closest to 500 without going over.

Perfect 500!



Player 1 \_\_\_\_\_ Date \_\_\_\_\_

Round						Running Total
1		+		=		
2		+		=		
3		+		=		
4		+		=		
5		+		=		
					Total	

Perfect 500!



Player 2 \_\_\_\_\_ Date \_\_\_\_\_

Round						Running Total
1		+		=		
2		+		=		
3		+		=		
4		+		=		
5		+		=		
					Total	